

IR-2555 DIV (2-3634)

**PROCESS FOR FORMING FAST RECOVERY DIODE
WITH A SINGLE LARGE AREA P/N JUNCTION**

ABSTRACT OF THE INVENTION

A fast recovery diode has a single large area P/N junction surrounded by a termination region. The anode contact in contact with the central active area extends over the inner periphery of an oxide termination ring and an EQR metal ring extends over the outer periphery of the oxide termination ring. Platinum atoms are diffused into the back surface of the device. A three mask process is described. An amorphous silicon layer is added in a four mask process, and a plurality of spaced guard rings are added in a five mask process.